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ABSTRACT

This paper explores challenges and successes of efforts to improve instruction or classroom effectiveness. Policymakers' assumptions, perspectives, and decisions are reviewed and results presented from several studies of instructional improvement activities conducted in Maryland between 1978 and 1985. These activities included Project Basic, a competency-based education program providing state-supported facilitators to local education agencies (LEAs); SITIP (School Improvement through Instructional Processes), providing state-supported technical assistants to all LEAs implementing one of four preferred instructional models; SEA-provided staff development for LEAs that included followup technical assistance; and supervision as practiced by the 24 LEAs. Study data show that policymakers develop assumptions and perspectives (theories in use) that guide program decisions. In Maryland, success with inperson technical assistance in one project influenced others. Effective technical assistants (TAs) resemble central office supervisors in having little line authority and relying primarily on expertise to influence teachers and other educators. Most TAs spend less than 60 percent of their time on instructional improvement, experience role conflict, and must work hard at collaboration and coordination. TAs furthest from the classroom can best influence organizational arrangements and resource allocation, while closer TAs may influence organizational units, local coordination, and linkage between new and existing instructional improvements. Since distant TAs are crucial, they need to earn credibility and learn effective strategies of influence. Included are 5 tables and a bibliography of 27 references. (MLH)

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INSTRUCTION FROM A DISTANCE

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Introduction

This paper explores challenges and successes in attempts to improve instruction from a distance. The focus is on processes rather than on the nature of good instruction or classroom effectiveness. Assumptions, perspectives, and decisions of policy makers are reviewed, and results presented from several studies conducted in Maryland. These studies, conducted by the author with various others, cover a seven year period beginning in 1978. Extensive data collection from the Maryland State Department of Education and all 24 local school systems included surveys, interviews, and on-site observation. Measures and methods are described in reports of each study. This paper summarizes some of the results of those studies relevant to influencing instruction from a distance.

Assumptions

In the last 10 years, concerns about student achievement have been addressed by: (1) state and local competency-based education (including mandated testing as a prerequisite for high school graduation); (2) research and knowledge utilization on classroom and school effectiveness, school improvement, and the role of the principal as an instructional leader; and (3) research and practice of various kinds designed to influence teacher quality. No matter what the focus -- student, teacher, principal; curriculum, instruction, testing; classroom, school, district -- policy makers appear to act on a given set of assumptions, which are:

- Concerns about student achievement, as expressed by business/industry or institutes of higher education (IHE), or as illustrated by results of standardized achievement tests, are valid and can and should be addressed by state and local education agencies (SEAs and LEAs)
- Student achievement can and should be improved by improving instruction*
- Instructional improvement will not occur in all schools nor in any systematic way unless teachers receive support and assistance
- Some, but not all, principals function as effective instructional leaders

* The focus here is on instruction -- the teaching/learning process, which may well include curriculum alignment. Curriculum content is obviously relevant to student achievement, but is not addressed in this paper.

- Some, but not all, LEAs have the capacity to implement effective instructional improvement programs
- Large systems -- LEAs or SEAs -- can and should develop programs and provide resources resulting in instructional improvement.

It is at this point that policy making begins, with each IHE, SEA, LEA, or external agency creating its own program. All intend to provide instruction to school staff from a distance, but each has a different philosophy or set of beliefs about organizational change.

Perspectives

In discussing nonrational organizations, Patterson, Purkey, and Parker (1986:29) point out that "the basis for power rests with the acquisition of three commodities: information... resources... and support." That is true not only for policy makers but also for classroom practitioners. Acknowledging this, policy makers in Maryland who were involved in instructional improvement, made purposeful efforts to acquire relevant information, e.g., from universities and research and development agencies. That information linked with their own to crystalize perspectives or beliefs about change in educational organizations, about instruction, and about supervision (or technical assistance). A summary of key perspectives that influence state policy is presented here.

Models of Planned Change

Each of six models of planned change is "rooted in a particular image of the practitioner" (Sieber, 1972), and all include provision of research-based information and technical assistance (see Table 1). Various state and federal programs have applied some of these models in school improvement efforts (see Table 2). Some conclusions derived from studies of those programs include:

- When a school or district addresses a perceived need by employing a problem-solving process using relevant research-based information, and assisted by a competent external change agent, program improvement occurs.
- Information alone is not enough; in-person assistance is necessary to initiate and sustain the program
- Quality of materials (or programs) is critical
- Local teams need to attend to planning for implementation and build their own capacity for systematic program improvement.

Facilitators of success include: (1) user need focus (Berman, et al., 1977; Louis & Rosenblum, 1981); (2)

Table 1
Stages in Six Models of Educational Change

Model	RDDA	Social Interaction	Problem Solving	Linkage	OD	Local process of change
Developers and/or proponents	Brickell, 1961; Clark & Guba, 1967	Rogers, 1962; Rogers & Shoemaker, 1971	Lewin & NTL, 1947; Lippitt, Watson, & Westley, 1958	Bhola, 1965; Havelock, 1969	Lewin & NTL, 1947; McGregor, 1961; Lippitt, Watson, & Westley, 1958	Berman, et al., 1975, 1977
Stages	1. Research	1. Awareness	1. Translation: need → problem	1. Identification (of need)	1. Entry & Contract Setting	1. Mobilization a. Problem definition b. Solution seeking c. Solution selection d. Generation of support e. Decision-making (re: strategies)
	2. Development a. Invention b. Design	2. Interest	2. Diagnosis (of problem)	2. Diagnosis (of problem)	2. Data collection	2. Implementation: Mutual adaptation of project and organization
	3. Diffusion a. Dissemination b. Demonstration	3. Evaluation	3. Search & Retrieval	3. Problem Statement	3. Diagnosis (of organization)	3. Institutionalization: Assimilation by teachers and incorporation by school system
	4. Adoption a. Trial b. Installation c. Institutionalization	4. Trial	4. Adaptation (of innovation)	4. Search & Retrieval	4. Action Interventions	
		5. Adoption	5. Trial	5. Selection (of innovation)		
			6. Evaluation	5. Implementation		

from: Roberts, J.M.E.(1978). Implementation of innovations in educational organization and instruction. Philadelphia, PA: Research for Better Schools.

Table 2

A Summary of Major Studies on Educational Change and Dissemination: The Importance of Assistance Roles

Study	Perspective of Change	Focus of Program	External Assistance Role/ Intensity of Involvement	Relevant Findings
Federal Programs Supporting Change (Berman & McLaughlin, 1978)	Somewhat Regulatory/ Technological	Study of effectiveness of several federal programs	Ad-hoc consulting/low	Institutional setting dominates change process; systematic external assistance may be needed; recommends increased SEA role
Study of Title I Demonstration (Vanecko & Ames, 1980)	Regulatory	Provides funds and regulations for compensatory education	Ad-hoc consulting and compliance monitoring/low	Compliance not necessarily associated with effectiveness; technical assistance needed
Evaluation of Project Information Packages (Stearns & Horwood, 1977)	Technological	Dissemination of packaged exemplary programs	none or little	Adoption/implementation rare without in-person assistance
Study of Pilot State Dissemination Program (Gieber, et al., 1972)	Technological and Linkage	Develop information bases, disseminate and promote use	Major role for educational field agents/moderate, high	Continuous involvement of generalist linker strongly associated with information use
Evaluation of National Diffusion Network (NDN) (Ehrick, et al., 1977; Crandall, et al., 1981)	Technological and Linkage	Dissemination of exemplary programs	Assistance roles: facilitator and developer demonstrator/moderate, low	External agent involvement associated with use and perceived benefits
Assistance Strategies of Six Groups that Facilitate Educational Change (Moore, et al., 1977)	Problem-Solving/ Context	Technical assistance groups for change at school/community level	Technical assistance teams/moderate, high	Need for system mapping, client responsibility, long-term involvement
Study of Rural Experimental Schools Program (Rosenblum & Louis, 1981)	Problem-Solving/ Context	3 years to plan and implement comprehensive change	Ad-hoc consulting/federal monitoring and assistance/low	Change is manageable process, but local conditions dominate, locals don't necessarily have capacity to acquire needed technical assistance
Study of State Capacity Building Program (Royce & Maday, 1981)	Technological/ Linkage	Build dissemination capacity, create state resource bases	Assistance roles varies by state; some major agent involvement/moderate, low	Some indications that use is enhanced with agent involvement
Study of the R&D Utilization Program (Louis, et al., 1981)	Technological/ Linking/Problem-Solving	Link research to practice, emphasis on external assistance and internal problem-solving process	Major role for field agents high/moderate	Combination of products, assistance and internal process, strongly associated with school change; intervention was more powerful than local conditions

from: Rosenblum, S. (1982). Technical assistance. Paper presented at the national seminars for Title I Dissemination and Program Improvement, Austin, Denver, Philadelphia.

mobilization of support in terms of generating enthusiasm and commitment to improvement (Chartera & Jones, 1975; Kirat, 1977; Kritek, 1976); (3) effective leadership by the superintendent and staff in planning and conflict resolution (Brickell, 1964:503; Hall & Alford, 1976:47); (4) involvement of an individual from an external agency to provide the knowledge base and assist in planning/implementation (Crandall, 1977; Louis & Rosenblum, 1981; Mann, et al., 1981); (5) careful allocation of resources, especially time and staff energy (Berman, et al., 1977); (6) an on-going planning/implementation process involving all levels of educators (Firestone, 1977; Moore et al., 1977); (7) provision for training and follow-up assistance with mutually agreed upon feedback and accountability systems (Berman, et al., 1977; Kirat, 1977; Kritek, 1977). These facilitators are interactive and each alone is unlikely to produce significant effects. (Roberts & Smith, 1982:58-59).

The autonomy and loose coupling of schools and districts work against the tradition of bureaucracy; top down mandates for rational application of rules and regulations do not work. At the same time, centralization of some functions has contributed to an organized complexity characteristic of systems in which problems vibrate from one part to another. Thus educational policy makers are stuck with "wicked problems," defined by Mason and Mitroff (1981:12) as having six characteristics: (1) interconnectedness, (2) complicatedness, (3) uncertainty, (4) ambiguity, (5) conflict, and (6) societal constraints. Faced with a problem such as state-wide instructional improvement, policy makers may need to acknowledge the power of all stakeholders, and design a collaborative structure.

to align one's own purposes with those of diverse others... requires a conceptual strategy for problem solving... a synthetic procedure which involves relating parts to wholes (Triat, 1978:331).

One approach to collaborative instructional improvement is staff development.

Staff development is guided by lists of recommendations, models or frameworks. Recommendations are derived from studies and syntheses (Little, 1981; Fielding and Schalock, 1986). Table 3 presents an example of program recommendations. Models or frameworks may be developed, field tested, and refined or may be derived from secondary analyses of studies. An example of a comprehensive model is the Concerns-Based Adoption Model (Hall et al., 1975), which includes "Levels of Use" of the innovation and "Stages of Concern" of participants. An example of a framework is the outcomes and components model (Joyce & Showers, 1984).

The Concerns Based Adoption Model (CBAM), developed over a period of more than 10 years at the R & D Center for Teacher Education at the University of Texas, includes many components.

Table 3

Characteristics of An Effective Staff Development Program

- The program has clear goals and long-range, comprehensive plans.
- It is based on the philosophy that the purpose of staff development is to improve classrooms and schools through the continuous professional development of educators and support staff.
- It furthers organizational goals and meets individual needs, and has strong administrative support (district and school).
- It supports major functional areas of service delivery, such as the instructional program, curriculum, and teacher-student interactions (particularly when a new program is introduced).
- The program contributes directly to edcellence in teaching and optimal student learning.
- The program balances district and school roles, and coordinates activities at both levels.
- Administrators, teachers, and other staff are included in planning, implementation, and evaluation.
- It maintains integrity of content (knowledge/skills), but adjusts delivery processes to meet the varying degrees of sophistication of the participants.
- It includes a variety of on-going activities, including workshops, group planning or curriculum activities, coaching, or individual study or practice.
- Activities are scheduled during non-instructional time and summers, providing for in-service credit or release time.
- Plans are modified based on evaluation and feedback.

From: Urban Initiative Sourcebook: A discussion of the literature and a directory of exemplary practices and programs. 1985:174. New Jersey State Department of Education.

Of interest here is Stages of Concern, a diagnostic measure which may be used to guide the evolution of a staff development or school improvement program. The concerns are: informational, personal, managerial, consequential, collaborative, and refocusing. Faced with a new learning task, people experience these concerns, and each needs to be addressed before progress can be made to the next. However, many staff development programs focus on consequences (e.g., use of Madeline Hunter's instructional design will increase teaching effectiveness), and management (e.g., therefore carry out "anticipatory set" activities). Teachers "stuck" with informational or personal concerns are resistant and/or confused, and little learning takes place. Staff development programs guided by knowledge of context-specific stages of concern are, according to Hall et al., more likely to succeed.

The Joyce and Showers model (1984) is summarized in Table 4. Their secondary analyses of several studies of the impact of staff development (for teachers) indicate that all five types of training components need to be used if the intended outcome is integrated application of new knowledge and skills by at least 75% of the teachers involved. Application results for less than 5% of teachers from rationale and theory building presentations. The addition of demonstration and modeling, and practice and feedback results in less than 10% more of the teachers applying the new skills. Coaching is the critical component for application. These findings (and dissemination of the model among trainers) have influenced program design for staff development for teachers, and attention is currently being given to types and roles for coaching.

In a study of the impact of state-sponsored inservice, results were analyzed in terms of the Joyce/Showers model (Roberts & Woolf, 1984). In this study the audience was not teachers but administrators, and in several of the cases a "training of trainers" approach was used. Results indicated that when the topic had already been identified as a local priority (e.g., by a superintendent), and/or a "contract" was agreed upon between trainer and trainees ahead of time, a high degree of application resulted, even if coaching was omitted, and sometimes even when practice and feedback were also omitted. On the other hand, if there were conflicting priorities, or if trainees saw little relevance in the information, even intense and high quality use of all components of the Joyce/Showers model resulted in little application.

This suggests that the results of studies of staff development for teachers may not be always generalizable for administrators, especially if administrative trainees are outside the organizational boundaries of the trainer. While the recommendations derived from adult learning and effective training may guide staff development for both teachers and administrators, actual program design may need to be different for each group. Alternatively, complex designs may include separate but complimentary learning activities as well as those involving cross-hierarchical teams. Collegial learning facilitates school improvement when such efforts include:

Table 4
Training Components and Outcomes*

Outcomes	Training Components
Awareness	Rationale and theory building -- study of relevant information by trainees, with trainers using standard presentation activities
Conceptualization	Demonstration and modeling -- observation by trainees of application by experts
Skill development	Practice and feedback -- trainees practice new skills (in relatively protected conditions or as a "pilot" effort) and receive fast feedback to help improvement
Application (horizontal transfer)	On-site coaching -- support and information exchange among trainees, assistance and troubleshooting from experts/trainers
Executive control (vertical transfer)	Integrated learning -- analysis of relationships of new and old information and situational influences, and development of integrated application that fits situations different from the initial "protected conditions"

* Based on Joyce, B.R., & Showers, B. Power in staff development through research on training. Alexandria, Va.: ASCD, 1984.

(1) a sense of partnership in the whole process of change from the initial identification of issues and objectives to the evaluation and modification of activities; (2) clearly identified functions for various role groups (e.g., teachers, building administrators) which capitalize upon their respective areas of expertise; (3) jointly accepted responsibility for keeping up on the current knowledge base and interpreting it in relation to a particular situation/setting; (4) a shared, ongoing emphasis on instructionally related tasks; (5) an effort to convey purposefulness not only among the educational personnel directly involved in the change effort but also among the general community and public at large; and (6) the development of a local problem-solving capacity which encourages the systematic investigation of issues and the development of alternatives for keeping these issues from becoming problems. (Vaughan, 1983:11)

As in most states, teachers in Maryland experienced inservice differently from the ideal described in the literature. SEA staff, and many at the central office level of LEAs, understood the knowledge base, but needed to find mechanisms to bring about change. The idea that was applied was in-person assistance.

Assistance

Havelock (1973) wrote about "change agents." Nash and Culbertson (1977) and others defined the role of "linker" in terms of boundary spanning between research and practice. "Technical assistants" (TA) became popular in the 1980s (e.g., Rosenblum, 1982). All three terms describe people and a process of monitoring, supervision, and support designed for individual and organizational improvement. The process may be statewide or local, but the principles can be readily translated to the school level.

The desired outcomes are mutually established (e.g., between principal and teacher). One person or agency is responsible for day to day implementation; another is responsible for supervisory support or assistance. Guidelines for such a process are suggested in a study of supervisory practices in Maryland (Roberts & Newcombe, 1984).

Cross-hierarchical decision-making occurs to define the philosophy and purpose of supervision and its relationship to evaluation. Subsequently, strategic planning takes place to design appropriate organizational arrangements and technical processes (Ackoff, 1977).

Evaluation for personnel decision-making (accountability) is separated in time and purpose from supervision for professional development (Knapp, 1983; McGreal, 1982; Olive, 1984; Stiggins & Bridgeford, 1984).

Supervision consists of the systematic provision of information, training, and assistance to aid teachers in

making improvements in delivery of instruction, as identified by individual assessment and/or organizational needs.

Identification of improvement opportunities (and the extent to which teachers effectively apply recommendations) occurs in part through classroom observation conducted for evaluation, and should be based on guidelines or standards that reflect general criteria of effective teaching. Observation is purposeful, focusing on observable behaviors, not personal conclusions (Evertson & Holley, 1981; Soar, et al., 1983).

Information collected during developmental assessment influences the design of staff and curriculum development activities for groups of teachers who have common improvement needs. It also contributes to information used in determining improvement activities, designed to meet needs as perceived by individuals (Cawelti & Reavis, 1980).

Responsibility for developmental assessment and assistance is shared among central office supervisors, principals, and experienced teachers (e.g., vice principals, resource teachers, and department heads). The three role groups are required to coordinate activities, with the principal assuming primary responsibility for evaluation, the department head assuming primary responsibility for individual on-site coaching (operational level activities), and the central office supervisor assuming primary responsibility for system-wide or cross-school activities. The teacher hears one message of evaluation, one message of improvement, and the two are related. In small systems, if one person is solely responsible for evaluation and assistance, purposes must remain separate (Hawesley, 1982; Olive, 1984), with the supervisor being careful to clarify his/her role when interacting with teachers (Roberts & Newcombe, 1984).

Provision of technical assistance should result in instructional gain, which may be defined as "(1) increase in teachers' knowledge and skill in effective instruction and a positive attitude toward the program/project; plus (2) increased student achievement, students' acceptance of responsibility for their own learning, and a positive attitude toward the program. As part of the SITIP study (Roberts & Kenney, 1985), a multiple regression analysis was conducted to determine which indicators were the best predictors of program institutionalization. The indicators included instructional gain, support from central office, support from school-based administrators, and fidelity (faithful regular use of a model as originally designed). Together those indicators explained approximately 48% of the variance in school institutionalization, which was significant at the .05 level. The strongest predictor was school administrator support followed by instructional gain. This suggests that distant TAs must choose models likely to result in instructional

gain, and then effectively influenced principals and department heads to support implementation.

Decisions

Given the foregoing assumptions and perspectives, Maryland policymakers made a decision to provide in-person technical assistance (TA) in support of state initiatives in instructional improvement. This decision was first applied for Project Basic, the competency-based system that includes a requirement for students to pass state tests in order to graduate from high school. A subsequent program -- School Improvement Through Instructional Process (SITIP) -- also provided TA. The basic principles for supporting instruction from a distance continue to be employed for other state initiatives including secondary school improvement and teacher quality.

The organizational arrangements, role and function of TAs (also called facilitators), and the effectiveness of Project Basic and SITIP have been documented in various studies and reports (e.g., Dudley, 1980; Mann et al., 1981; Roberts & Kenney, 1983; Odden & Odden, 1984; Miles & Kaufman, 1985; Shilling, 1985; Roberts & Kenney, 1985). Almost all refer to the state structure or context, partly to provide background information, and partly to show how the context influences decision and actions.

As Shilling (1985:11) points out, Maryland is a "two-tiered system" -- the state education agency (SEA) and 24 local education agencies (LEAs), each of which is a county. There is no in-between regional grouping. The smallest LEA has 2,500 students, the largest 116,000. LEA superintendents meet monthly with the SEA superintendent; even the most distant able to drive to the SEA in under four hours. Appointed by the state board of education, the current state superintendent, David Hornbeck, has held his position since 1976. The small number of LEAs, geographical proximity, and stability of state leadership have contributed to effective coordination and communication that makes instruction from a distance easier. Within each LEA, standardized core curricula (strongly influenced by Project Basic), and employment of competent administrative and supervisory staff also help to coordinate instructional improvement.

Similar conditions exist in other states that have made different decisions, using information, resources, and support in different ways. Maryland systematically used research-based information (including data collected on its own projects), invested in capacity building, and built support through participatory decision-making during project planning.

For Project Basic, LEA coordinators had been designated by local superintendents in 1977. In late 1978 SEA facilitators were selected by the state superintendent from various SEA departments. After a six month training and transition period (during which the facilitators themselves determined their role and function), each person was assigned to an LEA. Several original incumbents still hold the position. Some LEAs subsequently designated their own facilitator. Some facilitators

now work with two LEAs. The role continues as a state-local liaison; as a link for communication, research-based information, and coordination of state initiatives in instructional improvement. The 1978 decision -- to invest in facilitators rather than to provide project funds to LEAs -- was influenced by the research on educational change (Roberts, 1978), including the Rand study that described how opportunistic LEAs did not implement as planned, and how planning and management of funds were more important than the amount of money spent. Subsequent decisions to maintain the facilitator role were influenced by project successes, and no evidence that alternatives would be more effective in influencing/helping local systems implement state initiatives.

The Professional Development Academy began at about the same time as Project Basic. It was designed by SEA staff in a consortium of five states working with Research for Better Schools to explore strategies for administrative training and school improvement. The Academy conducts in-depth summer training for principals on six to nine topics each year. Each principal receives funds and follow-up technical assistance for implementation. Trainers not only know the substance of their topics, but also know and apply effective staff development strategies. SEA decisions to continue to invest in this program are influenced by current research (e.g., Joyce & Showers, 1984) and by evidence of success.

SITIP, initiated in 1980, did not at first include systematic technical assistance in its design. Teams from all 24 LEAs attended presentations on four instructional models: Active Teaching, Mastery Learning, Student Team Learning, and Teaching Variables. Evaluation of participants' "stages of concern" (part of the Concerns Based Adoption Model referred to earlier in this paper) indicated that LEAs were unlikely to be able to implement a model without on-site assistance (in addition to the summer training that had been planned). The SEA therefore designated eight people (two for each instructional model) to act as TAs. Over three years of state support, staff reassignments were made, and time investments decreased, but the role was maintained.*

The role of TA is very similar to the role of a central office supervisor. Neither has line authority over principals or teachers but both are held accountable for improving instruction from a distance. The following discussion explores TA roles and responsibilities.

* Over the three years, 13 individuals worked as SITIP TAs, each officially investing 15% of his/her time to that task.

Roles and Functions

Facilitator, supervisor, technical assistant, resource linker: no matter what the name, each has the same task -- to influence a highly autonomous person or group to change their behavior in order to increase student learning. The primary power base is expertise. Influence strategies include formal training as well as political manipulation. Impact is difficult to determine, and the role is not always well understood by senior administrators.

In the three years of SITIP, TA tasks fell into 10 general categories, together taking between 175 and 263 person days each year. This amount of time was shared among eight people, each officially assigned for 15% of his/her time. The same types of tasks are undertaken by LEA supervisors.

- Administration consists primarily of record keeping, and distributing and collecting forms and baseline data. These kinds of tasks take between 5% and 10% of TA time.
- Planning includes writing proposals and reaching agreement with other TAs or administrators on logistics of specific activities. It is on-going, takes about 10% time per year.
- Knowledge-building includes reading, attending workshops or university courses, collecting information from experts. The recognized "need to know" by the TA is important. In Year 1 of SITIP TAs did not see a need to build their own knowledge, but in Year 2 had to catch up. By Year 3 they could shift to "maintenance." School based supervisors spend more than twice as much time as central office staff on this activity (8% vs 4%). All effective incumbents invest additional time of their own.
- Materials development/selection relates to training and curriculum. Most of such work occurs at the central office level, in many instances adapting materials to fit local needs. Between 3% and 10% time is spent on this task.
- Training (staff development, inservice) includes facilitating, organizing, or conducting workshops. SEA TAs spent as much as 24% of their time training in Years 1 and 3 (the latter when a new group of LEAs became involved). Local supervisors spend up to 8% of their time on staff development.

- Administrative support includes logistics, project clarification, encouragement, and networking. It takes most time at the beginning of a project.
- Visiting sites includes classroom observations and trouble shooting. This is a popular task, in which supervisors/TAs can find a sense of self importance or value, seeing direct application of their ideas. For SITIP this task took 40% of the time in Year 1, 15% in Year 2 (for the same number of visits), and 24% in Year 3, when TAs spent more time trying to build local ownership. At the local level supervisory staff spend 30% of their time on this task. Since each LEA supervisor, on average, is assigned to 94 teachers in seven schools, he/she can give up to four hours per year to each teacher (assuming efficient time management and minimal travel time). School-based supervisors, on average, work with 20 teachers in elementary schools, 62 teachers in secondary schools, spending the equivalent of two days per year with each teacher. Time, "spread" and distance interact so that teachers are most immediately influence by school-based supervisors. This means that more distant TAs may best influence through program design, organizational systems, or training.
- Evaluation of teachers takes most time for principals (up to 8%); TAs are more likely to evaluate programs. (SITIP was evaluated by a third party, investing about 250 person days per year.)
- Communication includes interaction with peers and attending meetings, and takes about 15% time.
- Dissemination includes publicizing successes.
- Testing refers to student assessment, and takes up to 3% of local TA time.
- "Other" tasks inside or outside the system take 40% of school based supervisors' time.

Since expertise relevant to school-based staff is the most crucial resource for supervisors/TAs, it is useful to explore the nature of that expertise. The assistant superintendents of the SEA and 24 LEAs discussed this issue. Their recommendations are combined with credit count requirements for supervisory certification and with recommendations of a state task force. (See Table 5.) One point of interest is that expertise in instruction is defined only as "psychology of learning" for certification requirements and as "teaching/learning theory" by the 1979 task force. Current thinking expands those definitions. It is also interesting that knowledge of organizational theory is given considerable attention -- particularly relevant when the TA/supervisor is quite distant from the classroom.

Table 5

Synthesis of Suggestions for Preparation of Supervisors*

<u>Delivery</u>	
supervision ¹	staff development ¹
- models	human development ^{1,2,3}
- theories	adult learning ¹
- methods	
- observation techniques	
- "evidences" diagnosis	
clinical supervision ²	
teaching observation & analysis ²	
<u>Curriculum</u>	<u>Instruction</u>
curriculum development ¹	teaching/learning theory ^{1,3}
curriculum design ²	instructional approaches ¹
curriculum appraisal ²	teacher effectiveness ¹
data systems ²	learning styles ¹
content (subject expertise) ¹	psychology of learning ²
programmed instruction ²	
multi-media ²	
reading ³	
<u>Organization</u>	<u>Individual</u>
administration ^{1,2}	human relations ¹
management (esp. of time ^{1,3} & staff)	group dynamics ^{1,2}
organizational theory ^{1,3}	helping ¹
process of change ^{1,3}	conferencing & feedback ¹
communication/coordination ¹	communication ¹
societal/political context ^{1,2}	guidance & counseling ²
management of plant ³	relationships -- staff, ² students, etc.
systems theory ³	
role theory ³	
personnel, law, finance ³	

* Source of information: 1=topics suggested by conference participants;
2=current Maryland credit count requirements; 3=proposed Maryland
requirements (1979 Task Force).

from: Newcombe, E.(1984). Supervision: Conference proceedings. Philadelphia,
PA: Research for Better Schools.

Conclusions

The following recommendations for technical assistance and training are derived from the study of SITIP:

If SEA staff are assigned as part-time technical assistants (TAs), they need to form a group that has strong leadership from a senior administrator, and real support from their regular supervisors.

Staff selected as TAs should value the program and the regular assignments that can readily be integrated with the improvement project. Their responsibilities should be adjusted so that each TA team (of two or three people) spends 40 to 60 days a year on the improvement project.

Effective TAs should have a sound knowledge of instruction, curriculum development, staff development, planned change and organizational analysis, and the models/innovations to be implemented. They should be familiar with schools and school systems, particularly those to which they are assigned, and should establish positive productive relationships with those systems, maintaining program integrity in the context of local constraints.

Three recurring problems should be addressed by the TA group: (1) conflicting demands of regular and project responsibilities, (2) individual opportunity to learn and group attention to effective communication, and (3) differences between state and local expectations of the responsibilities of each organization and the "ownership" of the program.

From a local perspective, TAs are useful when they are program advocates; provide quality information, training, and assistance relevant to local needs to facilitate rich fidelity of implementation; and engage in cross-hierarchical problem-solving that helps to clarify program purpose, maintain harmony, and contribute to instructional improvement. TAs should support local leadership teams, and acknowledge successes.

The overall design for training should include various kinds of activities for various audiences. In general, trainers should recognize that the more intense the intended outcome, the greater the frequency of trainer/trainee interaction, and the smaller the ratio of trainers to trainees. Also, the less intense the outcome (e.g., awareness), the less investment is likely from participants.

While participants enjoy the less intense kinds of training activities, they value and are more likely to be influenced by the more intense activities (especially when content is highly relevant). As the project progresses, training activities should increase in intensity, and when participants have "executive control" of the model/innovation, training should stop (Roberts & Kenney, 1985).

In instruction from a distance, the TAs furthest from the classroom will probably have the most impact on program design, organizational arrangements, general allocation of resources, and the nature of the innovation or instructional model(s) used. Those closer to the classroom are more likely to influence organizational units, local coordination, and linkage of the new model with existing curriculum and instruction. No matter how close, the TA/supervisor can influence but cannot control the instruction: that is in the hands of the teacher.

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INSTRUCTION FROM A DISTANCE
(Abstract)

Studies were conducted of various instructional improvement activities in Maryland between 1978 and 1985. These activities included:

- Project Basic, a competency based education program which provided facilitators supported by the state education agency (SEA) to each of the 24 local education agencies (LEAs).
- SITIP, School Improvement Through Instructional Processes, which provided state supported technical assistants (TAs) to all LEAs choosing to implement one of four instructional models (active teaching, mastery learning, teaching variables, student team learning).
- Staff development provided by the SEA to LEAs that includes follow-up technical assistance
- Supervision as practiced by the 24 LEAs.

Data from these studies show that policy makers -- in SEAs or large LEAs -- develop assumptions and perspectives (theories in use) which guide program decisions. In Maryland, success with in-person technical assistance in one project influenced others.

Effective TAs (also called change agents or linkers) are like central office supervisors in that they have little line authority and rely primarily on expertise to influence teachers and other educators. That expertise relates to the subject or program being implemented, instruction in general, curriculum development, staff development, planned change, and organizational theory. While in some cases, a TA may be assigned full time to facilitate instructional improvement, most spend less than 60% of their time in this role, and for SITIP 15% was most common. In the TA role, the following tasks are addressed (in order of time invested): (1) visiting sites, classrooms, (2) conducting training, (3) planning and development, (4) administration and budget, (5) communicating, (6) learning (building their own knowledge), (7) providing general support, (8) telling (outside) others about the program (9) selecting/developing materials, and (10) evaluating. TAs often experience role conflict, need to balance demands of their home organizational level and the clients', and have to work at collaboration and coordination.

TAs furthest from the classroom can best influence organizational arrangements, and resource allocations. Those closer to the classroom are more likely to influence organizational units, local coordination, and linkage of new and existing instructional improvements. If a given model is to be institutionalized, it must result in instructional gain (teacher learning and student achievement), and must be supported by central office and school based administrators. Since the latter are so crucial, more distant TAs need to earn credibility and learn effective strategies of influence.

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